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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/777,764

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Geoffrey McLennan

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FULBRIGHT & JAWORSKI L.L.P.
600 CONGRESS AVE.
SUITE 2400
AUSTIN, TX 78701

EXAMINER

DO, ANH HONG

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/777,764	Applicant(s) MCLENNAN ET AL.	
	Examiner ANH H. DO	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-3,5-9,11-15 and 18-25 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10,17 and 27 is/are allowed.
- 6) ☒ Claim(s) 4,16 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/10/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

2. The drawings were received on 12/26/2007. These drawings are accepted.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4, 16, and 26 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted step is in between the steps of "converting" and "comparing"/"displaying" (i.e., the step of "comparing" does not use the resulted device independent color space for comparison or display).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 16, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Patent 6,819,790) in view of Kumada et al. (U.S. Patent No. 7,035,454).

Regarding claim 4, Suzuki discloses:

- acquiring a subject color medical image in a device dependent color space (Fig. 1(a) shows sub-regions of medical image 104 are acquired by MTANN 100);

- comparing a subject color medical image to normal color medical image data (Fig. 1(a): step 110 comparing the pixels of the subject color medical image (i.e., the MTANN's likelihood distribution map 108 to the pixels of normal color medical image data (i.e., the teacher likelihood distribution map 106) ;

- identifying abnormal pixels from the subject color medical image (Fig. 1(a): error calculation unit 112 and col. 15, lines 9-13: determining whether a certain pixel belongs to a class such as normal or abnormal).

Suzuki does not disclose expressly converting the device dependent color space to a device independent color space.

Kumada discloses converting the device dependent color space to a device independent color space using input color to Lab converter 101 (Fig. 1).

Suzuki & Kumada are combinable because they are from color image processing method.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to convert the device dependent color space to a device independent color space in Suzuki as taught by Kumada.

The suggestion/motivation for doing so would have been to allow precise color reproduction and to manage the generation history of the generated profile (Kumada, col. 1, lines 32-36).

Therefore, it would have been obvious to combine Suzuki with Kumada to obtain the invention as specified in claim 4.

Regarding claim 16, Suzuki discloses:

- acquiring a subject color medical image in a device dependent color space (Fig. 1(a) shows sub-regions of medical image 104 is acquired by MTANN 100);
- displaying the subject color medical image (col. 16, lines 29-31);
- comparing a subject color medical image to normal color medical image data (Fig. 1(a): step 110 comparing the pixels of the subject color medical image (i.e., the MTANN's likelihood distribution map 108 to the pixels of normal color medical image data (i.e., the teacher likelihood distribution map 106) to identify abnormal pixels from the subject color medical image (Fig. 1(a): error calculation unit 112 and col. 15, lines 9-13: determining whether a certain pixel belongs to a class such as normal or abnormal);
- highlighting abnormal pixels on the displayed subject color medical image (col. 16, lines 29-31: displaying a nodule at a center).

Suzuki does not disclose expressly converting the device dependent color space to a device independent color space.

Kumada discloses converting the device dependent color space to a device independent color space using input color to Lab converter 101 (Fig. 1).

Suzuki & Kumada are combinable because they are from color image processing method.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to convert the device dependent color space to a device independent color space in Suzuki as taught by Kumada.

The suggestion/motivation for doing so would have been to allow precise color reproduction and to manage the generation history of the generated profile (Kumada, col. 1, lines 32-36).

Therefore, it would have been obvious to combine Suzuki with Kumada to obtain the invention as specified in claim 16.

Regarding claim 26, Suzuki discloses:

- acquiring a subject color medial image in a device dependent color space (Fig. 1(a) shows sub-regions of medical image 104 is acquired by MTANN 100) using an endoscope (as shown in Figs. 14(a) and 14(b));
- displaying a region of interest from the subject color medical image (col. 16, lines 29-36: displaying a local window Rs);
- comparing the region of interest to normal color medical image data (Fig. 1(a): comparing the local window of the medical image 108 to normal color medical image 106) to identify abnormal pixels from the region of interest (Fig. 1(a): error calculation unit 112 and col. 15, lines 9-13: determining whether a certain pixel belongs to a class such as normal or abnormal);

- highlighting abnormal pixels on the displayed region of interest (col. 16, lines 29-31: displaying a nodule at a center of the local window).

Suzuki does not disclose expressly converting the device dependent color space to a device independent color space.

Kumada discloses converting the device dependent color space to a device independent color space using input color to Lab converter 101 (Fig. 1).

Suzuki & Kumada are combinable because they are from color image processing method.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to convert the device dependent color space to a device independent color space in Suzuki as taught by Kumada.

The suggestion/motivation for doing so would have been to allow precise color reproduction and to manage the generation history of the generated profile (Kumada, col. 1, lines 32-36).

Therefore, it would have been obvious to combine Suzuki with Kumada to obtain the invention as specified in claim 26.

Allowable Subject Matter

7. Claims 10, 17, and 27 are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 10, 17, and 27, the prior art, taken either singly or in

combination, does not teach:

- displaying the subject color medical image and highlighting areas of the subject color medical image that have a saturation that is greater than normal.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANH H. DO whose telephone number is 571-272-7433. The examiner can normally be reached on 5/4-9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, EILEEN LILLIS can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 24, 2008

/ANH H DO/
Primary Examiner, Art Unit 2624